IN THE CLAIMS:

1. (currently amended) A method of <u>maintaining an electronic manifest for</u> tracking and predicting [[the]] <u>a</u> capacity utilization of a goods delivery system, the goods delivery system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date for approval by a buyer, a respective order, and [[the]] <u>a</u> number of delivery vehicle slots the respective order will fill, said method of <u>maintaining an electronic manifest for</u> tracking and predicting the capacity utilization comprising the steps of:

defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the ~~deliver~~ <u>delivery</u> agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the <u>specific</u> delivery zone, including a number of delivery vehicle slots for each zip group in the <u>specific</u> delivery zone, [[the]] <u>a</u> total number of delivery vehicle slots in the <u>specific delivery</u> zone defining a zone delivery capacity of the delivery agent;

determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the ~~respective~~ <u>specific</u> delivery zone, the <u>respective</u> zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the <u>specific</u> delivery zone;

determining whether the respective order can be shipped on the <u>respective</u> first potential ~~ship~~ <u>delivery</u> date based on [[the]] <u>a</u> number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots;

returning a respective date that the respective order can be delivered based on the respective number of available delivery vehicle slots on the respective date for approval by the buyer;

updating the ~~respective~~ delivery agent capacity utilization matrix for the specified period in the electronic manifest after the respective order has been included within said respective number of used delivery vehicle slots;

calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a ~~new capacity~~ workload value for the delivery date approved by the buyer, the ~~new capacity~~ workload value equals ~~(old capacity value +~~ (the respective number of ~~filled~~ used delivery vehicle slots including slots filled from the respective order approved by the buyer)/(the respective zone maximum number of delivery vehicle slots)[[()]];

setting a capacity flag for each delivery date in the electronic manifest by comparing a sum of ~~capacity~~ workload values to a predetermined over capacity value for said delivery date, the sum of ~~capacity~~ workload values equals [[the]] a sum of ~~capacity~~ a plurality of workload values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising:

setting an over capacity flag for said delivery date if the sum of ~~capacity~~ workload values is greater than or equal to [[a]] the predetermined over capacity value for said delivery date; or

setting an under capacity flag for said delivery date if the sum of ~~capacity~~ workload values is less than the predetermined over capacity value for said delivery date; [[and]]

predicting the capacity utilization of the goods delivery system ~~by determining whether the zone workload signal for~~ for a time frame based on the workload value for each delivery date of a predetermined number of days ~~is increasing or decreasing~~ preceding the time frame; and

storing the predicted capacity utilization of the goods delivery system for the time frame in the electronic manifest.

2-5. (canceled)

6. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 1, wherein said predetermined over capacity value for the sum of selected designated days in said historical period is about 700 percent and wherein said historical period the predetermined number of preceding delivery dates is the previous ten days and wherein said over capacity value is a workload greater than or equal to 100 percent.

7-8. (canceled)

9. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 1, further comprising [[the]] a step of predicting [[the]] a probability of a future respective used slot being full based on historical over capacity conditions.

10. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 9, wherein the step of predicting the probability of a future respective used slot being full further comprises [[the]] steps of:

obtaining the workload values for a predetermined period of time; and

determining the probability that the next used slot will meet an over capacity condition using a distribution function;

wherein said over capacity condition is defined as the state when the workload value is greater than or equal to 100 percent.

11. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 1,

~~further comprising the~~ said step of predicting the capacity utilization of the goods delivery system comprises determining whether [[the]] a trend line of the ~~capacity utilization~~ workload values of the time frame is changing.

12. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 11, wherein the step of predicting future capacity utilization further comprises [[the]] a step of determining that the trend line of the capacity utilization is increasing when [[the]] a slope of [[the]] a regression line for a first fixed period of workload values is greater than zero, within a predetermined confidence interval.

13. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 11, wherein the step of predicting future capacity utilization further comprises [[the]] a step of determining that the trend line of the capacity utilization is decreasing when [[the]] a slope of [[the]] a regression line for a first fixed period of workload values is less than zero, within a predetermined confidence interval.

14. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 12, wherein said first fixed period is seven days and said predetermined confidence interval is about 95 percent.

15. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 13, wherein said first fixed period is seven days and said predetermined confidence interval is about 95 percent.

16. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 1, wherein said specified period of time is thirty days.

17. (currently amended) A computer program storage medium readable by a computer system and encoding a computer program of instructions for executing a computer process for <u>maintaining an electronic manifest for</u> tracking and predicting [[the]] <u>a</u> capacity utilization of a goods delivery system, the goods delivery system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date for approval by a buyer, a respective order, and [[the]] <u>a</u> number of delivery vehicle slots the respective order will fill, said computer process comprising the steps of:

defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the ~~deliver~~ <u>delivery</u> agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the <u>specific</u> delivery zone, including a number of delivery vehicle slots for each zip group in the <u>specific</u> delivery zone, [[the]] <u>a</u> total number of delivery vehicle slots in the <u>specific delivery</u> zone defining a zone delivery capacity of the delivery agent;

determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the ~~respective~~ <u>specific</u> delivery zone, the <u>respective</u> zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the <u>specific</u> delivery zone;

determining whether the respective order can be shipped on the <u>respective</u> first potential [[ship]] <u>delivery</u> date based on [[the]] <u>a</u> number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots;

returning a respective date that the respective order can be delivered based on the respective number of available delivery vehicle slots on the respective date for approval by the buyer;

updating the ~~respective~~ delivery agent capacity utilization matrix for the specified period in the electronic manifest after the respective order has been included within said respective number of used delivery vehicle slots;

calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a ~~new capacity~~ workload value for the delivery date approved by the buyer, the ~~new capacity~~ workload value equals ~~(old capacity value +~~ (the respective number of ~~filled~~ used delivery vehicle slots including slots filled from the respective order approved by the buyer)/(the respective zone maximum number of delivery vehicle slots)[[)]];

setting a capacity flag for each delivery date in the electronic manifest by comparing a sum of ~~capacity~~ workload values to a predetermined over capacity value for said delivery date, the sum of ~~capacity~~ workload values equals [[the]] a sum of ~~capacity~~ a plurality of workload values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising:

setting an over capacity flag for said delivery date if the sum of ~~capacity~~ workload values is greater than or equal to [[a]] the predetermined over capacity value for said delivery date; or

setting an under capacity flag for said delivery date if the sum of ~~capacity~~ workload values is less than the predetermined over capacity value for said delivery date; [[and]]

predicting the capacity utilization of the goods delivery system ~~by determining whether the zone workload signal for~~ for a time frame based on the workload value for each delivery date of a predetermined number of days ~~is increasing or decreasing~~ preceding the time frame; and

storing the predicted capacity utilization of the goods delivery system for the time frame in the electronic manifest.

18-21. (canceled)

22. (currently amended) The computer ~~process~~ program storage medium as recited in claim 17, wherein said predetermined over capacity value ~~for the sum of selected designated days in said historical period~~ is about 700 percent and wherein ~~said historical period~~ the predetermined number of preceding delivery dates is the previous ten days ~~and wherein said over capacity value is a workload greater than or equal to 100 percent~~.

23-24. (canceled)

25. (currently amended) The computer ~~process~~ program storage medium as recited in claim 17, further comprising [[the]] a step of predicting [[the]] a probability of a future respective used slot being full based on historical over capacity conditions.

26. (currently amended) The computer ~~process~~ program storage medium as recited in claim 25, wherein the step of predicting the probability of [[a]] the future respective used slot being full further comprises the steps of:

obtaining the workload values for a predetermined period of time; and

determining the probability that the next used slot will meet an over capacity condition using a distribution function;

wherein said over capacity condition is defined as the state when the workload value is greater than or equal to 100 percent.

27. (currently amended) The computer ~~process~~ program storage medium as recited in claim 17, ~~further comprising the~~ said step of predicting the capacity utilization of the goods delivery system comprises determining whether [[the]] a trend line of the ~~capacity utilization~~ workload values of the time frame is changing.

28. (currently amended) The computer ~~process~~ program storage medium as recited in claim 27, wherein the step of predicting future capacity utilization further comprises the step of determining that [[the]] a trend line of the capacity utilization is increasing when [[the]] a slope of [[the]] a regression line for a first fixed period of workload values is greater than zero, within a predetermined confidence interval.

29. (currently amended) The computer ~~process~~ program storage medium as recited in claim 27, wherein the step of predicting future capacity utilization further comprises the step of determining that [[the]] a trend line of the capacity utilization is decreasing when [[the]] a slope of [[the]] a regression line for a first fixed period of workload values is less than zero, within a predetermined confidence interval.

30. (currently amended) The computer ~~process~~ program storage medium as recited in claim 28, wherein said first fixed period is seven days and said predetermined confidence interval is about 95 percent.

31. (currently amended) The computer ~~process~~ program storage medium as recited in claim 29, wherein said first fixed period is seven days and said predetermined confidence interval is about 95 percent.

32. (currently amended) The computer ~~process~~ program storage medium as recited in claim 17, wherein said specified period of time is thirty days.

33. (currently amended) A method of maintaining an electronic manifest for tracking and predicting [[the]] a capacity utilization of a goods delivery system, the goods delivery system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date based on a selected potential ship date for approval by a buyer, a respective order, and [[the]] a number of delivery vehicle slots the respective order will fill, said method of tracking and predicting the capacity utilization comprising the steps of:

defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the ~~deliver~~ delivery agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the specific delivery zone, including a number of delivery vehicle slots for each zip group in the specific delivery zone, [[the]] a total number of delivery vehicle slots in the specific delivery zone defining a zone delivery capacity of the delivery agent;

determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the ~~respective~~ specific delivery zone, the respective zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the specific delivery zone;

determining whether the respective order can be shipped on each day of a set of potential ship dates based on [[the]] a number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots;

wherein said set of potential ship dates includes the respective dates from a selected potential ship date to a first determined potential ship date;

returning an indication of the respective dates that the respective order can be delivered within said set of potential ship dates based on the respective number of available delivery vehicle slots on the respective date for approval by the buyer;

updating the ~~respective~~ delivery agent capacity utilization matrix for the specified period in the electronic manifest after the respective order has been included within said respective number of used delivery vehicle slots;

calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a ~~new capacity~~ workload value for the delivery date approved by the buyer, the ~~new capacity~~ workload value equals ~~(old capacity value +~~ (the

respective number of filled used delivery vehicle slots including slots filled from the respective order approved by the buyer)/(the respective zone maximum number of delivery vehicle slots)[[)]];

setting a capacity flag for each delivery date in the electronic manifest by comparing a sum of capacity workload values to a predetermined over capacity value for said delivery date, the sum of capacity workload values equals [[the]] a sum of capacity a plurality of workload values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising:

setting an over capacity flag for said delivery date if the sum of capacity workload values is greater than or equal to [[a]] the predetermined over capacity value for said delivery date; or

setting an under capacity flag for said delivery date if the sum of capacity workload values is less than the predetermined over capacity value for said delivery date; [[and]]

predicting the capacity utilization of the goods delivery system by determining whether the zone workload signal for for a time frame based on the workload value for each delivery date of a predetermined number of days is increasing or decreasing preceding the time frame; and

storing the predicted capacity utilization of the goods delivery system for the time frame in the electronic manifest.

34-37. (canceled)

38. (currently amended) The method of maintaining an electronic manifest for tracking and predicting a capacity utilization of a goods delivery system as recited in claim 33, wherein said predetermined over capacity value for the sum of selected designated days in said historical period is about 700 percent and wherein said historical period the predetermined number of preceding delivery dates is the previous ten days and wherein said over capacity value is a workload greater than or equal to 100 percent.

39-48. (canceled)